

## CLAIMS

1                   1. An electrical machine, such as a three phase current  
2 generator and a starter generator, comprising a stator housing; a shaft  
3 supported in said stator housing and carrying an impeller; a stator plate pack  
4 mounted on said stator housing and surrounding said impeller; means  
5 forming a stator and a rotor chamber and a space which is separated from  
6 said chambers in a cooling medium tight manner; a cooling medium pump  
7 which is driven by a shaft for heating a cooling medium, said cooling medium  
8 pump being arranged in said space; a magnetic coupling through which said  
9 cooling medium pump is drivable and which transmits a driving moment from  
10 said shaft to said cooling medium pump, said magnetic coupling having a  
11 driving part and a driven part which are separated from one another by a  
12 magnetically inactive and electrically poorly conductive wall.

1                   2. An electrical machine as defined in claim 1, wherein said  
2 driven part is formed as a magnetic disk with permanent magnets.

1                   3. An electrical machine as defined in claim 1, wherein said  
2 magnetic coupling is formed as an asynchronous drive, one of said parts  
3 being formed as an exciter while the other of said parts is formed as an  
4 electrically highly conductive disk.

1                   4. An electrical machine as defined in claim 3, wherein said  
2 driving part is formed as said exciter and said driven part is formed as said  
3 electrically highly conductive disk.

1                   5. An electrical machine as defined in claim 3, wherein said  
2 driving part is formed as an electrically highly conductive disk, while said  
3 driven part is formed as an exciter.

1                   6. An electrical machine as defined in claim 3, wherein said  
2 exciter is formed as an element selected from the group consisting of an  
3 electromagnet element and a permanently magnetic element.

1                                7. An electrical machine as defined in claim 6, wherein said  
2                                electromagnet has a coil with a current which is controllable or regulatable.

1                                8. An electrical machine as defined in claim 1; and further  
2                                comprising an outer housing which surrounds said stator housing so that a  
3                                part of a cooling medium circulation is provided between said stator housing  
4                                and said outer housing.

1                                9. An electrical machine as defined in claim 8, wherein said  
2                                outer housing has a cooling medium inlet which is central to said shaft and  
3                                in which a first bearing point for a pump shaft is located.

1                                10. An electrical machine as defined in claim 9; and further  
2                                comprising means forming a stator and rotor chamber side wall region which  
3                                separates said driving part and in which a second bearing point for said  
4                                pump shaft is located.

1 11. An electrical machine as defined in claim 10, wherein said  
2 wall region is a part of a housing bottom which closes said stator and rotor  
3 chamber and receives a bearing.

1 12. An electrical machine as defined in claim 10, wherein said  
2 wall region is a part of a wall part which is releasable independently of a  
3 bearing of said shaft.